

1 We claim:

2
3 1. An improved cooling fan mechanism for a motor-driven
4 pressure washer comprising;

5
6 a generally toroidal drive pulley rotatably mounted within the
7 pressure washer, said drive pulley driven by a motor within
8 the pressure washer;

9
10 said drive pulley including a generally cylindrical outer rim
11 having inner and outer sides, a central hub having a central
12 rotational axis and a plurality of spokes extending between
13 said central hub and said outer rim for supporting said outer
14 rim in spaced relation from said central hub;

15
16 at least some of said plurality of spokes of said drive pulley each
17 consisting of an angled fan blade having a forward air-
18 engaging edge generally adjacent said outer side of said outer
19 rim and a rearward edge generally adjacent said inner side of
20 said outer rim;

21
22 said forward air-engaging edges of said fan blades operative to
23 engage air upon rotation of said drive pulley and said angled
24 fan blades operative to force the engaged air into the
25 pressure washer via said fan blades to cool the interior of
26 the pressure washer thereby reducing the internal temperature
27 of the pressure washer.
28

1 **2.** The cooling fan mechanism for motor-driven pressure
2 washers of claim **1** wherein said fan blades are angled between
3 approximately ten to forty-five degrees (10° to 45°) from
4 perpendicular to the central rotational axis of said center hub of
5 said drive pulley thereby deflecting air encountered during the
6 rotation of said drive pulley towards said inner side of said drive
7 pulley and inwards to internal elements of a motor-driven pressure
8 washer.

9
10 **3.** The cooling fan mechanism for motor-driven pressure
11 washers of claim **1** wherein each of said spokes of said drive pulley
12 consist of one of said angled fan blades.

13
14 **4.** The cooling fan mechanism for motor-driven pressure
15 washers of claim **1** wherein said angled fan blades each further
16 comprise an air deflection plate having a slight concave curvature
17 for enhancing air propulsion towards internal elements of a motor-
18 driven pressure washer.

1 5. In combination:

2
3 an motor-driven pressure washer including a base platform, a motor
4 mounted on said base platform including a rotating power
5 output shaft, a generally toroidal drive pulley mounted on
6 said rotating power output shaft for rotating said drive
7 pulley, water pump means mounted on said base platform, a
8 drive belt extending between said drive pulley and said water
9 pump means for operating said water pump means and a safety
10 housing having at least one wall structure at least partially
11 enclosing said drive pulley, said water pump means and said
12 drive belt; and

13
14 an improved cooling fan mechanism for said motor-driven pressure
15 washer including;

16
17 said drive pulley including a generally cylindrical outer rim
18 having inner and outer sides, a central hub having a central
19 rotational axis and a plurality of spokes extending between
20 said central hub and said outer rim for supporting said outer
21 rim in spaced relation from said central hub;

22
23 at least some of said plurality of spokes of said drive pulley each
24 consisting of an angled fan blade having a forward air-
25 engaging edge generally adjacent said outer side of said outer
26 rim and a rearward edge generally adjacent said inner side of
27 said outer rim;

1 said forward air-engaging edges of said fan blades operative to
2 engage cooling air upon rotation of said drive pulley by said
3 motor and pull cooling air into said safety housing of said
4 motor-driven pressure washer via said fan blades to circulate
5 cooling air through the interior of said motor-driven pressure
6 washer thereby reducing the internal temperature of said
7 motor-driven pressure washer.

8
9 **6.** The combination of claim **5** wherein said safety housing
10 further comprises at least one air passage opening generally
11 adjacent said outer side of said drive pulley to permit air flow
12 into said safety housing for cooling of the internal temperature of
13 said motor-driven pressure washer.

14
15 **7.** The combination of claim **6** wherein said safety housing
16 further comprises at least one air passage opening generally
17 adjacent said inner side of said drive pulley to permit air flow
18 out of said safety housing towards said motor for cooling of
19 temperature of said motor.

20
21 **8.** The combination of claim **5** wherein said fan blades are
22 angled between approximately ten to forty-five degrees (10° to 45°)
23 from perpendicular to the central rotational axis of said center
24 hub of said drive pulley thereby deflecting air encountered during
25 the rotation of said drive pulley towards said inner side of said
26 drive pulley and inwards to internal elements of said motor-driven
27 pressure washer.

1 **9.** The combination of claim **5** wherein each of said spokes of
2 said drive pulley consist of one of said angled fan blades.

3
4 **10.** The combination of claim **5** wherein said angled fan blades
5 each further comprise an air deflection plate having a slight
6 concave curvature for enhancing air propulsion towards the internal
7 elements of said motor-driven pressure washer.

8
9 **11.** The combination of claim **5** wherein said central hub of
10 said drive pulley further comprises a center air-seal disk which is
11 operative to generally prevent negative airflow into the center of
12 said central hub of said drive pulley.